

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF AIR AND HAZARDOUS MATERIALS

TO: Thomas E. Wright, Chief
FROM: Martha S. Delaney, Engineer ^{MSD}
DATE: 25 March 1982
SUBJECT: Results of Winter Screening Study for Airborne Chemicals
Near Ciba-Geigy Corporation

Ciba-Geigy
1 *R12001194323*
FILE *R-13*
OTHER: _____

Air emissions around Ciba-Geigy Corporation of Cranston, RI were sampled in an attempt to identify and quantify some or all of the organic chemicals present. The type of sampling done is called a screening study by the U.S. Environmental Protection Agency, Surveillance & Analysis Section.

Four portable samplers (charcoal adsorbers and self-compensating air pumps) were positioned in a manner so as to have three downwind and one upwind (to serve as a reference). Samplers ran for approximately three hours before being collected for analysis. The chain of custody for preserving sample integrity followed EPA laboratory policy and procedures. These samples were frozen so as to maintain the chemicals on the charcoal until analyses could be performed (thermal desorption followed by gas chromatography).

Results of this screening study show that low levels of isopropyl alcohol, toluene, benzene and trichloroethylene were detected by the samplers. In all cases concentrations of all the chemicals were well below the government's MEG values.

MEG stands for Multimedia Environmental Goals. Such numbers have been established by EPA for several hundred organic chemicals for water as well as for air. Ideally, quantities of chemicals in the air should not be higher than the established MEG concentration.

Present plans are to repeat such a screening study on a day when odors in the ambient air are at levels which are generally known to contribute to neighborhood complaints.

Enclosures



SEMS DocID

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SAMPLING LABORATORIES

Park View Boulevard Cranston	This sample was upwind and can serve as a control. No odors.
Milton Road - Rathburn Avenue Warwick	South-southeast of the production buildings of Ciba-Geigy. Downwind. Barely detectable malodor associated with zinc sludge.
Holmes Road - Rathburn Avenue Warwick	South-southeast of the production buildings of Ciba-Geigy. Downwind. Barely detectable malodor associated with zinc sludge.
Larch Avenue - Vine Avenue Warwick	East of some non-production buildings of Ciba-Geigy. Downwind of the waste water treatment plant. No odors.

WEATHER DATA WHILE SAMPLING

Wind was from the north (8-12 mph) but from the east (6 mph) then south-east (4 mph) after about two hours.

Temperatures ranged from 15° to 23°F.

Relative humidity ranged from 14 to 18%.

SCREENING STUDY RESEARCHERS

Donald Porteous	U.S. EPA Surveillance & Analysis Division Chief, Air Branch
Dr. Thomas Spittler	U.S. EPA Surveillance & Analysis Division Chief, Technical Support Branch
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Martha Delaney	R.I. Department of Environmental Management Engineer, Division of Air & Hazardous Materials
Don Pray	R.I. Department of Health Chemist, Division of Laboratories

TABLE 1 - Quantities of chemicals measured in air samples near Ciba-Geigy Corporation on 19 January 1982. Results indicate chemical levels are below goals set by the U.S. Environmental Protection Agency. Data reported as parts per billion (ppb), for chemical volume per air volume.

Chemical Name MEG (Allowable)	Isopropanol 950	Toluene 240	Benzene 24	Trichloroethylene ~ 238
Park View Boulevard Cranston	< 1	0.6	0.7	0.35
Milton Road - Rathburn Avenue Warwick	40.4	18.2	1.2	0.6
Holmes Road - Rathburn Avenue Warwick	13.8	4.4	1.6	0.35
Larch Avenue - Vine Avenue Warwick	< 1	2.3	1.3	0.31

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